

GREATER CAPITAL REGION CAREER PATHWAYS INITIATIVE

WSC

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I. PURPOSE

The Greater Capital Region Career Pathways Initiative (CPI) is a collaboration of four Workforce Investment Boards, three community colleges, and a number of local companies and other organizations that is unprecedented in the Capital Region of New York State. For the past 18 months, this partnership has been creating a new workforce development system to provide regional, demand-driven career pathways for the biotechnology sector.

Originated under a New York State Department of Labor (NYSDOL) program to map career ladders in growing sectors, CPI has made great strides since its inception in September, 2003. CPI's Workforce Investment Boards have worked to make their respective operations more responsive to market demands, and the community colleges have begun to create new curriculum in partnership with the WIBs and local biotechnology firms. Now, CPI needs to codify the positive lessons learned and make the transition into a regional planning and collaboration stage to become a sustainable entity that is effective in the long-term.

This document is written for three primary audiences. First, it provides a report to NYSDOL on the activities of the Greater Capital Region Career Pathways Initiative from its formation to the Spring of 2005. Second, it is a recommendation document to be used as a reference by the members of the CPI collaboration as they make future plans. Third, it provides background and insight into the project for those interested in forming regional career pathways or pursuing sector-based workforce development strategies in other regions.

II. BACKGROUND AND OBJECTIVES

THE NEED

Since March 2001, New York State has lost approximately 146,200 manufacturing jobs, and the state is 49th in the nation for retaining traditional manufacturing jobs with higher wages, according to the Business Council of New York State. One of the hardest hit areas of the state is the Capital Region, eleven counties surrounding Albany that includes the cities of Schenectady, Rensselaer, Saratoga Springs, Glens Falls and Lake George. In the last five years, approximately 6,000 manufacturing jobs have been lost in the Capital Region.

However, not all is depressed in the technology sector. High-tech manufacturing, which includes biotechnology and nanotechnology, holds out promise as a well-paying, stable alternative to the traditional manufacturing jobs that are leaving the region. The biopharmaceutical industry is expected to add more than 122,000 jobs in the U.S over the next few years, according to an October 2004 study by the Milken Institute, which identifies New York State as one of the leading states in the country with potential for biopharmaceutical development. Over the past two decades, the biotechnology industry in New York has grown by 64 percent, from about 22,000 to more than 36,000 jobs.

Nearly one-third of New York State's biopharmaceutical and biomedical job creation has occurred in the Capital Region. And the growth is continuing at an increasingly rapid pace. State officials have projected the region will add as many as 8,400 jobs in the biotechnology and nanotechnology fields by the end of 2007.

Part of that growth can certainly be attributed to the more than $1 billion that the State of New York has invested over the last eight years to build the biotechnology and scientific research infrastructure in the greater Capital Region. Funding for academic laboratory and business incubator construction and development of new higher level university curriculum have fostered regional growth in research and development activities, which in turn has drawn venture capital, new companies and the expansion of existing firms in the region.

With this investment and commitment to attracting high-tech employers comes the reality that a highly-skilled workforce is needed. The challenge facing policy makers and workforce system leaders in the Capital Region is how to parlay the unprecedented investment and projected growth in high-tech manufacturing, biotechnology and nanotechnology into high-wage, career-track jobs for constituents, particularly those leaving the traditional manufacturing sector. To target the response to this problem, Workforce Strategy Center (WSC) has pinpointed three specific areas of training that are needed by biotechnology employers in the region:

Laboratory Technicians: Employees with laboratory technician skills are widely employable across the biotechnology sector. Knowledge includes basic chemistry, specialized equipment usage, contextualized algebra, computer applications, government regulations, on-the-job safety, packaging and handling, and introduction to a corporate culture.

Medical Device Manufacturing: Medical device manufacturers reported rapid growth projections in the region over the next three years, leading to the creation of several hundred jobs. Requirements for the job include General Manufacturing Processes, biology, chemistry, contextualized algebra, contextualized business writing, computer applications, government regulations, on-the-job safety, packaging and handling, and introduction to a corporate culture.

Animal Handling: Animal handling occupations were found to be in high demand and experiencing rapid turnover among current workers. Requirements include basic biology, contextualized algebra, computer applications and basic animal husbandry skills combined with hands on experience in a clean room environment working with mice.

To maximize industrial growth in biotechnology, local workforce development systems must mitigate the advantages for firms to move to lower wage regions or regions historically dense with biotechnology companies. The availability of relevant and timely training has a positive impact on existing companies and has regionwide implications for potential growth.

However, when mapping career ladders in the region, Workforce Strategy Center learned that the current workforce system was not fully equipped to meet the disparate demands of companies in the emerging biotechnology sector. The workforce system did not often collaborate with community partners or local community colleges to resource innovative new training programs, and employers rarely looked to the public workforce system as a source of employees for high-tech jobs. Positions in the biotechnology field require high-skill training, much of which needs to be created with input from firms for their often-changing and very specific needs. Local colleges lacked the capacity to provide short-term credit bearing training to meet employer demand.

With a demonstrated need for collaboration between the workforce system's ability to recruit jobseekers, community colleges' educational expertise and companies' knowledge of their specific needs for qualified workers — and with the unprecedented opportunity for sustainable industry growth fueled by New York State's investment in the region — the Greater Capital Region Biotechnology Career Pathways Initiative (CPI) was formed.

THE GREATER CAPITAL REGION CAREER PATHWAYS INITIATIVE

The CPI collaboration originated under a New York State Department of Labor (NYSDOL) program to map career ladders in growing sectors. The NYSDOL program spurred new relationships between the partners, who first started working collectively in September of 2003. At the beginning, the collaboration included the region's four Workforce Investment Boards (WIBs): the Capital Region WIB, Saratoga/Warren/Washington WIB, Fulton/Montgomery/Schoharie WIB, and the Columbia/Greene WIB. The WIBs conceptualized a regional partnership that would aim to improve workforce development services for regional jobseekers and employers.

Shortly thereafter, the partners were expanded to include Hudson Valley Community College, Adirondack Community College and Columbia Greene Community College, with critical input from several local biotechnology firms: Boston Scientific Corporation, Taconic Farms Inc. and Albany Molecular Research Inc. Workforce Strategy Center (WSC) provided strategic planning assistance, and the New York Association of Training and Employment Professionals (NYATEP) assisted with the planning and process facilitation.

This partnership represents an entirely new collaboration formed to create a new workforce development system in the region for biotechnology — a system that redesigns many of the standard practices among the partners and one that can be replicated and expanded for other new technology manufacturing workforce needs in the Capital Region. The next section (III. Activities) explains in detail CPI's progress to date. These activities are a means toward a number of ends:

- Realign the policies and practices of the four WIBs to direct resources to encourage the development of training for demand occupations and skills most needed by regional employers.
- Coordinate the programs and capacities of the regional community colleges with those of the public workforce development system.
- Create a sustainable model that employs a funding design that leverages WIA and other resources.
- Affect institutional policies by implementing good practices that demonstrate a grassroots need for policy change.

THE WSC CAREER PATHWAYS MODEL

By focusing on creating better workforce development for the biotechnology sector in the Capital Region, CPI has pursued a Career Pathways strategy, an economic development process for strengthening sectors by meeting the training needs of workers and employers. The Career Pathways approach has three primary objectives:

- Efficiently use public workforce system resources to supply in-demand, trained employees at all career levels for businesses
- Provide jobseekers with a high probability of gaining career track employment and career mobility
- Contribute to conditions that support economic expansion in targeted sectors by lowering labor costs for businesses

Career Pathways present an innovative framework for organizing publicly funded employment, training and social supports to provide coordinated and well-rounded services to meet the needs of businesses, job seekers and incumbent workers — including those in low-wage, low-skill jobs. The model builds on six key assumptions about the common ground that the public and private sectors can use to build regional partnerships:

- Economies operate within regions rather than within incorporated city and county boundaries
- Regional economies need workers to possess the most current and marketable skills to compete globally
- Workforce skills development is a large cost born by businesses
- Community colleges are the infrastructure most capable of delivering adaptable training to wide populations of people at many education levels
- Social support systems can be coordinated to work within economic development frameworks
- There is unrealized potential for closer relationships between workforce systems, education systems and employers

Building regional career pathways involves five broad, analytical stages, characterized by a process-oriented decision making methodology. From beginning to end the process guides regions through data analysis, planning, partnership development, goal setting and implementation of strategies. The CPI project has used this five-stage process as a guide to its work.

- Environmental Scan: Convene education, workforce, economic development, employer and labor groups to identify occupations of importance to local economies and map the requirements of entry and advancement at successive levels in each field. Conduct a gap analysis to assess how well existing education, workforce and social service programs and services support worker access and advancement in the target fields, and identify weaknesses.

- Pathway Planning: Convene front-line staff from partner education, workforce and social service agencies to modify existing programs and services and build new ones to eliminate barriers and create more seamless avenues to employment and advancement in each field.

- Implementation: Operationalize recruiting, training and placement plans. Often implementation of strategies takes place in stages where aspects of programs or policies are rolled out and beta-tested before broader implementation occurs.

- Continuous Improvement: Systematically track education and labor market outcomes at each level and continually modify programs and services to support advancement. Continue to evaluate program changes to ensure that they produce the desired improvements.

- Expand the Pathway: Build on the pathways model to bring it to scale in order to serve larger numbers of students and employers. Adapt the approach for replication in other sectors of importance to the regional economy or to other populations of jobseekers.

Taken together, these steps represent a continuous improvement process that, if done right, will have a systemic and sustainable impact on the performance of the partner organizations.

III. ACTIVITIES

The CPI partnership's accomplishments over the last eighteen months are extensive. To date CPI, under the strategic direction of WSC, has engaged in the following activities, building the organization and initiating the first series of trainings.

INITIAL RESEARCH

- Reviewed reports, news articles and labor market data focused on the nanotechnology and biotechnology industries in the Capital Region to determine industry trends.
- Researched skill requirements for jobs in the local biotechnology field.
- Examined potential target populations of One-Stop customers for skill matches.
- Examined training capacities and current curriculum offerings at local educational institutions including community colleges, four-year colleges and BOCES.

ADDITION OF COMMUNITY COLLEGES

- Created partnership with Adirondack Community College, Hudson Valley Community College and Columbia Greene Community College.
- Decided to focus efforts on laboratory research, animal handling and medical device manufacturing jobs, based on WSC research projections.

IMPLEMENTATION STRATEGY

- Convened several meetings with the New York Association of Training and Employment Professionals (NYATEP), the WIBs and postsecondary institutions to jointly develop key steps for the planning process. Presented national best practices in sector-based workforce development as a benchmark.
- Chose a two-stage program implementation strategy beginning with a curriculum design and implementation stage, and then progressing to a regional planning and collaboration stage.

INITIAL CURRICULUM DECISIONS

- Community colleges assessed their current programs, training capacity, potential to adapt national models, resource opportunities and training costs. The schools also shared experience in developing career ladders, including examples of contextualized basic skills training and customized curriculum.
- Reached agreement with all three community colleges to develop accelerated curriculum for targeted industries.
 - Saratoga/Warren/Washington (SWW) WIB partnered with Adirondack Community College to a develop medical device manufacturing curriculum
 - Capital Region WIB partnered with Hudson Valley Community College (HVCC) and is working to develop a laboratory technician curriculum
 - Columbia Greene WIB partnered with Columbia Greene Community College (GCCC) and is working to develop an animal handling curriculum

CONNECTION TO LOCAL BIOTECHNOLOGY

FIRMS

- The WIBs projected a program budget that enabled the development of an employer incentive package, including opportunities for targeted recruitment, customized training, paid tryout employment and upgrade training for new and incumbent workers.
- Broadened partnerships to include local companies.
 - SWW/ACC partnered with Boston Scientific Corporation
 - Capital Region/ HVCC partnered with Albany Molecular Research Inc.
 - CG/CGCC partnered with Taconic Farms
- Companies communicated to colleges over the course of several meetings their hiring needs and job descriptions. Boston Scientific Corporation also provided tours of company sites.

CURRICULUM CREATION

- SWW/ACC developed a medical device manufacturing curriculum jointly with Boston Scientific staff. The newly developed 16-week curriculum, which trains entry-level workers, is offered for seven credits. The curriculum teaches basic algebra, Windows-operating environments, contextualized reading/ English, introduction to the working environment and basic science.
- CG/CGCC developed an animal-handling curriculum jointly with Taconic Farms. The five-week curriculum, which does not grant credit, trains entry-level animal handlers. The course is followed by a three credit field study where jobseekers gain on-the-job experience. The curriculum teaches basic biology, zoology, animal care and introduction to the working environment including physical strength training related to job responsibilities.
- The Capital Region WIB and Hudson Valley Community College are working to develop a curriculum for Albany Molecular Research Inc. to train laboratory workers.

PARTICIPANT RECRUITMENT

- The WIBs refined their resource and recruitment strategies based on the outcomes of the curriculum design.
 - The SWW WIB enabled Individual Training Accounts awarded by the One-Stop to pay for the training.
 - The plans established qualifications for potential recruits. For the ACC/Boston Scientific medical device manufacturing curriculum, students would need 10th grade math and literacy levels and show an interest in the field.
 - The SWW One-Stops developed recruiting plans jointly with ACC and Boston Scientific. By utilizing the One-Stop database, SWW identified more than 30 possible candidates who would possibly qualify for the course. An orientation meeting in November 2004 for the candidates included a TABE test, which served as an entrance exam for the for-credit course.

CURRICULUM IMPLEMENTATION

- The first training class offered at Adirondack Community College had 17 attendees learning basic medical device manufacturing.

SUSTAINABILITY OUTREACH

- The CPI partners prepared a grant for additional funding to expand the programs, submitted to the U.S. Department of Labor as part of the High-Growth Initiative. The partners have not heard the status of this grant.
- The partners met with U.S. Representative John Sweeney's office to inform them of the collaboration and ask for his support of their efforts.
- In Saratoga/Warren/Washington, the WIB began conversations with two medical device companies (CR Bard and Angiodynamics) as potential employers of graduates of the Adirondack Community College course.

IV. LESSONS LEARNED

Because of the unprecedented nature of the collaboration of workforce development agencies, community colleges, and local employers in the Capital Region, CPI provides an opportunity to examine the successes and challenges to date, for both CPI's future and for other projects. Several of the ideas below provide background for the recommendations outlined in the next section. Others provide insight into successful tactics for workforce development strategies of any type.

WHILE DIFFICULT, SUSTAINABLE FUNDING IS POSSIBLE

Several of the WIBs involved in CPI maintain that their budgets do not include sufficient Title 1/WIA funding to pay for curriculum development and training for this project. In the case of one WIB — the Saratoga/ Warren/Washington agency — Individual Training Accounts were allocated to the participants of the pilot class.

For CPI programming to grow, WIA funds must be dedicated for career pathway courses. In the future, we believe there is opportunity to strategically realign how funding is allocated for programs. The challenge is to allocate traditional training funding, such as Individual Training Accounts or customized training dollars, with coursework created for the biotechnology industry. It is important to note that staff at the One-Stop centers may resist reallocating funding to pay for career pathways. Because One-Stop resources are typically limited, including the One-Stops from the beginning of the planning process is important to gain buy-in.

REGIONAL LEADERSHIP SHOULD BE EXPLICIT

The geographic lines bounding WIB constituencies do not coincide with the boundaries of biotechnology's economic activity in the region. For example, the Fulton/Montgomery/Schoharie WIB has a workforce that could provide employees to companies across the region (a relatively short drive for a well-paying job), but currently has no local biotech firms within its service area. Without CPI as a regional entity, the WIB would have no way to provide its constituents with an entry to the biotechnology field.

However, while the partners agree in principle that the regional nature of the initiative is appealing, there is no formal body that leads the collaboration. The initiative at times resembles three small-scale projects. Currently, for instance, the WIBs have not taken advantage of the ability to utilize each others' training curriculum. For CPI to operate a truly multi-jurisdictional partnership, it should also have a governance structure that does not rely on any one partner to lead the entire project — a task that is beyond the scope of any one WIB's traditional scope of work.

WHEN CREATING COURSEWORK, ADDRESS ACADEMIC RIGOR ISSUES

Our college partners noted a tension between employer requests for practical skill training and their faculty's emphasis on maintaining academic rigor. Depending on the specifics of the situation, this tension can be handled in one of several ways. Including both for-credit faculty and employer representatives in curriculum design, for example, keeps communication lines open. At Adirondack Community College, it became apparent during in-depth discussions that academic rigor did not need to be watered down to satisfy the employer request for short-term, skill-based training. Because medical device manufacturers have highly regulated work environments, it was important to develop training that incorporated sufficient levels of substantive knowledge.

Another potential option is to avoid the issue by using non-credit classes, which do not generally need to meet the same academic criteria. In the case of Columbia Greene Community College, the animal handling curriculum is not a credit-bearing course. The college did not have the in-house capacity (faculty or laboratories) to deliver animal handling coursework for credit. Additionally, the new course would have been difficult to align with the existing programs because its subject matter did not fit with current degree offerings. In this case, the partnering company is content with short-term, non-credit bearing training because the animal handling industry is plagued with such high employee turnover issues that this "partial solution" is sufficient for their needs. The downside to this approach is that students receive no credit, which typically provides a running start to attend college and move up a career ladder, and the WIA system bears the entire cost burden of the course, whereas for credit courses are eligible for financial aid.

AVOID BECOMING ENTANGLED IN THE CREDIT APPROVAL PROCESS

Because there is generally a lengthy process to attaching credit to new curriculum at community colleges, a new for-credit course can be delayed for quite a long time before becoming available. We recommend adopting one of two approaches when developing new curriculum for credit. The first route is to treat the Continuing Education department as the forward division for testing new curriculums, allowing them to be developed and made operational quickly and cheaply on the non-credit side of the college. Once non-credit training begins, colleges can measure the viability of the new courses before deciding whether to undergo the lengthy process of transitioning it into a for-credit offering.

The second approach is to assemble modularized and contextualized pieces from curriculums that are already approved for credit at the school. Adirondack Community College used this approach by pulling pieces from other courses and contextualizing them for medical manufacturing. The curriculum did not need to be approved for credit because its modules already bore credit.

BALANCE CUSTOMIZED VERSUS SCALABLE TRAINING

Curriculum designed jointly by college faculty and employers increase the likelihood of higher placement and retention rates of graduates. Experience tells us that employers are interested in hiring workers who are familiar with their corporate environments. The challenge is to design curriculum that teach skills that are specific enough so employers feel that graduates have gained a degree of customized familiarity with their company's procedures without compromising the viability of graduates to work at other employers.

CPI has attempted what can be described as the highest common denominator approach. When creating coursework, the designers included specific skills that are shared across the sector without watering down the content to the point that it is not useful to the sector's employers. The medical device manufacturing curriculum, for example, designed jointly by Boston Scientific Corporation and Adirondack Community College, taught basic algebra by contextualizing the concepts through tasks such as reading medical manufacturing blueprints — but not the specific blueprints of Boston Scientific's products. Graduates will have a generalized concept of the ideas that allows them to be employed at other medical device manufacturers in the region.

BE CERTAIN TO INCLUDE ALL PARTNERS

Because community colleges and the Workforce Investment Boards are the focus of much of the planning and budgeting in the initial stages of any career pathway (and because they provide the majority of the leadership of a project like CPI), it can be too easy to limit the input from other partners, such as local firms, One-Stops and community organizations. While all of these entities have been involved with the CPI planning process, details and workplans were not always as widely distributed as they could have been.

A case in point is the One-Stops, which were not aware until late in the process of the need to recruit participants for the Saratoga/Warren/Washington course. Their assistance in recruitment ended up being crucial, but problems with their planning and budgets could have been avoided had they known about their role earlier. In other cases, such as with local businesses, the issue is providing extra outreach to increase the number of partners involved with CPI.

V. RECOMMENDATIONS — TRANSITIONING PROGRAMS INTO POLICY

Collectively, the Greater Capital Region Career Pathways Initiative partners have built programs to train and place workers in high-demand occupations across the region's biotechnology sector. Individually, the Workforce Investment Boards have worked to make their respective operations more responsive to market demands, and community colleges have worked to bridge the gap between credit-bearing and non-credit education. The programs that have been developed or are under construction are examples of demand-driven workforce development.

CPI has made notable strides. However, it currently falls short of its long-term goal as a regional hub for biotechnology workforce development. CPI has been operating to date in a "launch" mode, planned and made operational in an 18-month period when all decisions were being made for the first time. Now, CPI is reaching a turning point into its regional planning and collaboration stage. To become a mature, effective, sustainable entity, CPI needs to codify the positive lessons learned and create systemic change in other ways. For example, to date, budgets have been hard to assemble and the participation from stakeholders has varied at times from highly engaged to barely noticeable. Our recommendations are intended to help the CPI partners transition their newly built programs into institutionalized policies and capture the benefits of regional collaboration.

ASSIGN LEADERSHIP

For CPI to adopt systemic changes, the participating institutions must commit to increasing its profile within their organizations. All of the institutions should adopt the CPI goals, for example, and become accustomed to collaborating with nontraditional partners. To change organizational culture, the leadership must increase their support of CPI, making the importance of its success clear.

Additionally, CPI as a collaboration needs to be aggressively developed by a lead partner who drives to fulfill the objectives set forth in the plan. The lead agency needs to have a track record of past support for CPI and the capacity to coordinate program development on a regional level. As such, we recommend that a regional leader emerge from the Adirondack Community College – Saratoga Warren Washington WIB collaboration. This collaboration has demonstrated support of the CPI concept by developing the medical manufacturing curriculum jointly with Boston Scientific Corporation. Additionally, they have developed a close internal working relationship over the CPI development period, and they have the institutional capacity to house and manage the program.

ESTABLISH A REGIONAL COUNCIL

Choosing a lead regional partner is only part of the solution to providing long-term leadership and regional visibility. In order to provide strategic direction for the project as a whole and foster regional cross-site collaboration, we recommend that CPI establish a regional council. Currently, the initiative has not pursued opportunities for connection across the region.

The regional council — which would include representatives from WIBs, colleges, economic development agencies, employers and others — would establish a collective mission for the initiative, facilitating cross-site learning and setting strategic direction. This group would also be responsible for managing and setting the agenda for regionwide activities for CPI as a whole, such as:

- Researching and pursuing funding
- Defining the parameters of the program and manage partnership agreements
- Creating a formalized venue for cross-site learning
- Raising the visibility of this project for local firms, jobseekers, funders, etc.
- Raising the visibility of the capital region as a biotechnology friendly region for employers

PURSUE SUSTAINABLE FUNDING

Funding for career pathways will continue to be tight as long as the programs remain an afterthought or "add-on" to the WIBs main work. In 2004, the WIBs involved in CPI received funding from the New York State Department of Labor to revamp their strategic plans and work with Workforce Strategy Center. But external funding for CPI training has been difficult to assemble. As such, the WIBs must also allocate resources internally, and CPI as a group must develop a strategy to search for external funding, which could include grants, contributions from employers, federal education dollars and in-kind staff time from all of the partners.

Mobilizing support for career pathways requires a high level of internal commitment from each WIB. Most notably, WIBs should collectively examine how WIA Title 1 resources are allocated and how resources can be collectively leveraged. National best practices suggest that one effective strategy is for WIBs to allocate portions of training dollars to pathways and collaborate with other WIBs to create regional pools of funds to support sector-based programming. This allocation of funds should be done during the annual budget process. National best practices also show that Individual Training Accounts can be leveraged to pay for pathway training if community colleges are eligible training providers under WIA. To implement these practices, the following should be accomplished:

- Review allocation procedures for training dollars and keep pathways funds separate from funding that supports One-Stop infrastructure.
- Grant preference to community colleges for training, because courses at these schools can be delivered for credit and with recognizable industrial credentials.
- Increase flexibility for WIBs to fund the development of courses that take more than one year to develop by not assigning consequences for program development funding that does not get spent in the allotted program year.
- Pool funding regionally, taking into consideration the cost of training, the location of employers and the available funding at each WIB.

INCREASE MARKETING AND OUTREACH

CPI needs promotion among employers, jobseekers and policymakers. Short-term and long-term marketing activities should be devised. In the short term, CPI should market the existing curriculum and training programs to additional employers. The primary long-term goal should be to enlist employers for their expertise in designing accelerated for-credit curriculum for new high-demand occupations in the industry. Suggestions for promoting the initiative:

- Develop packaged presentations for business groups such as the Chamber of Commerce and the New York Biotech Association.
- Meet with individual companies to market the services directly.
- Conduct a return-on-investment study that details bottom-line advantages for employers.
- Publish yearly reports detailing performance outcomes and program developments.
- Present at workforce development seminars and conferences.

WORK MORE CLOSELY WITH ONE-STOPS AND SUPPORT SERVICES

Based on conversations with WIBs, community colleges and employers, it is apparent that the One-Stops have been at times left out of the planning process for CPI programs. In the end, the One-Stops played a crucial role in the recruitment and assessment of program participants, as well as the key source of supportive services such as transportation and childcare. Our recommendation is that the partners engage One-Stops in all aspects of program design and make calculated assessments about the support service needs of target populations. Specifically, SWW One-Stop managers and staff should be interviewed to glean lessons learned regarding their involvement in the medical device manufacturing implementation and to make recommendations for how to strengthen One-Stop involvement in the pathway.

PLAN FOR CONTINUOUS IMPROVEMENT

One of the most important components of the implementation plan is to develop a comprehensive assessment and evaluation plan. CPI and its partners should outline a plan to measure the performance of the program and to suggest improvements where appropriate. The findings from the assessment(s) should be linked to a feedback loop that informs program improvements.

In addition to improving the program based on assessment results, the partners should consider scaling the program to include new curriculum for additional biotechnology sub-sectors or new industries based on analysis of market supply and demand. All plans to scale the program should follow the program development process outlined above.

VIII. CONCLUSION

Despite fierce competition among regions across the nation, the biotechnology and life sciences industry is projected to grow and offer great employment and business development opportunities in the Greater Capital Region. Over the last 18 months, the CPI partners have collaborated and planned for biotechnology sector growth by developing curriculum and training programs to attach jobseekers to biotechnology career pathways and improve workforce skills for the benefit of employers. Institutionalizing the programs and building policy from the lessons learned will ensure the long term viability of CPI, and capitalizing on the regional potential of this initiative will maximize the benefit for employers and jobseekers.